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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,678	12/13/2001	Geoffrey B. Rhoads	P0509	9753

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DIGIMARC CORPORATION  
19801 SW 72ND AVENUE  
SUITE 100  
TUALATIN, OR 97062

EXAMINER

NAKHJAVAN, SHERVIN K

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 12/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/017,678

Applicant(s)

RHOADS ET AL.

Examiner

Shervin Nakhjavan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Double Patenting*

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. Claims 1 and 14 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1 and 9, respectively, of prior U.S. Patent No. 6,411,725.

This is a double patenting rejection. Claim 1 of the instant application is word to word identical to claim 1 of the patent. Although, claim 14 has additional limitation of watermark encoding in an audio track accompanying the video signal in the preamble as opposed to claim 9 of the patent, the use of alternative language "or" does not make the claims distinct if the watermark is encoded into the video signal.

3. Claims 1 and 14 of the instant application are directed to the same invention as that of claims 1 and 9, respectively, of commonly assigned patent 6,411,725. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

Since the U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP § 2302), the assignee is required to state which entity is the prior inventor of

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the conflicting subject matter. A terminal disclaimer has no effect in this situation since the basis for refusing more than one patent is priority of invention under 35 U.S.C. 102(f) or (g) and not an extension of monopoly.

Failure to comply with this requirement will result in a holding of abandonment of this application.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Ulicki (US 4,028,733).

Regarding claims 1-27, Ulicki teaches, a method of encoding substantially imperceptible auxiliary information into a video signal including at least one video object, the method comprising: steganographically encoding object information about the video object into the video signal (Column 1, Line 62 through Column 3, Line 2, where the video object is e.g. the signature and the object information is the frame segment corresponding to the signature encoded within a frame in a predetermined position of the frame); and associating the object information with an action, where the action is performed in response to user selection of the video object through a user interface while the video signal is playing (Column 2, Lines 16-25, where upon selection of

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particular message, an action of retrieval of the message is performed where the message is the video object);

limitation of claim 2, the video signal is steganographically encoded with at least two identifiers, each identifier corresponding to distinct video objects in frames of the video signal, and each identifier being associated with actions relating to the corresponding video objects (Column 1, Lines 65-68, where each frame segment is an identifier of a unique message in a frame);

limitation of claim 3, the object information is encoded in a watermark signal that covers a portion of the screen area of frames in the video signal where the video object is located (Column 2, Lines 7-16, where "the predetermined portion of the plurality of displayable video scan lines" is the watermark signal that covers a portion of the screen or frame area);

limitation of claim 4, object information for at least two different video objects in the video signal is steganographically encoded in different portions of frames of the video signals where the corresponding video objects are located (Column 2, Lines 7-16, where different objects or frame segments do not overlap in a frame and are located in different portions of the frame);

limitation of claim 5, the object information includes a screen location information indicating where the video object is located in the video signal (Column 2, Lines 7-16, where predetermined portion or location of the frame is inherently disclosing the location of the segment or object);

limitation of claim 6, object information is encoded for at least two different video objects in the video signal, and the object information includes location information indicating where the video objects are located in the video signal (Column 2, Lines 11-16, where there are plurality of unique objects or frame segments and the their locations are known within a frame);

limitation of claim 7, the object information is encoded in a pre- recorded video object, which forms part of the video signal (Column 1, Lines 55-68, where the frames and frame segments being video objects are previously recorded);

limitation of claim 8, the pre-recorded video object is composited with video frames to form the video signal (Column 1, Lines 55-68, where video objects or frame segments are composited with frames of the video signal);

limitation of claim 9, the pre-recorded video object is composited with at least one other video object to form the video signal, where the video objects are each steganographically encoded with object specific information (column 1, Line 62 through Column 2, Line 2, where frame objects are steganographically encoded with frame segments with imperceptible information hidden within a segment);

limitation of claim 10, the video object is encoded with the object information as part of a process of capturing the video signal of physical objects, and the object information pertains to the physical objects captured in the video signal (Column 2, Lines 29-4, where frame segment is encoded into the frame as an object information for capturing the object e.g. signature);

limitation of claim 11, the object information is encoded as part of a process of capturing the video signal during a live broadcast or transmission of the video signal (Column 18, Lines 44-51, transmission of object information is live and the video object is being retrieved or captured by a user);

limitation of claim 12, object information is encoded for at least two different video objects depicted in frames of the video signal (Column 2, Lines 11-16, where there are more than one video object or signature in a frame);

limitation of claim 13, object information is encoded for at least two different video objects such that the object information is synchronized with corresponding video objects depicted in the video signal during playback (Column 3, Lines 27-48, where order of retrieving of randomly selected message or video object is discussed);

limitation of claim 14, a method for using a watermark encoded into a video signal or in an audio track accompanying the video signal, where the watermark comprises information regarding a video object in the video signal, the method comprising: decoding the watermark information (Column 19, Lines 15-22, where video frame identification code or watermark encoded in the audio track corresponding to object information or frame segment is decoded); receiving a user selection of the video object (Column 5, Lines 27-41, where user selects a unique message to be displayed); and executing an action associated with the video object information (Column 5, Lines 50-62, where retrieval action is performed upon selection of the bank teller);

limitation of claim 15, the video signal includes watermark information for at least two different video objects in the video signal, and the watermark information associates

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the video objects with object actions or information (Column 8, Lines 23-33, where there are plurality of identification codes or watermarks corresponding to frame number of plurality of frame segment information or video objects);

limitation of claim 16, the audio track includes watermark information for at least two different video objects appearing in the same frames of the video signal, and the watermark information associates the video objects with object specific actions or information (Column 8, Lines 23-33, where plurality of objects or frame segments are located within a video frame and the watermark or frame identification encoded in the audio track provides frame number information corresponding to each of the video objects or frame segments);

limitation of claim 17, a system for creating watermark enabled video objects comprising: an encoder for encoding a watermark in a video sequence or accompanying audio track corresponding to a video object or objects in the video sequence (Column 2, Lines 3-6, where an identification information is encoded into the audio track referencing a particular frame in a video sequence); and a database system for associating the watermark with an action or information such that the watermark is operable to link the video object or objects to a related action or information during playback of the video sequence (Column 7, Line 63 through Column 8, Line 8, where storage of the system 20 is discussed as being a database retrieval system responsive to information stored in each frame segment or video object);

limitation of claim 18, the watermark is operable to link a corresponding video object to an action or information (Column 8, Lines 45-55, where corresponding



identification code in the audio track leads to a frame(s) associated with a frame segment or video object selected for display);

limitation of claim 20, a system for processing a watermark enabled video object in a video signal comprising: a watermark decoder for decoding a watermark carrying object specific information from the video signal and linking object specific information to an action or information (Column 19, Lines 15-22, where upon detection of the frame identification from item 308 the associated frame or frames of data are linked to the frame segment selected); and a rendering system for rendering the action or information (Figure 8, Item 200 is the action or information rendering system);

limitation of claim 21, system further including a user interface for enabling a user to select a watermark enabled video object during playback of the video signal (Column 5, Lines 40-46);

limitation of claim 22, the user interface includes the rendering system for rendering the action or information of the selected video object (Column 5, Lines 50-63);

limitation of claim 23, the user interface is in a separate device from the watermark decoder (Column 5, Lines 50-63, where remote user's keyboard is located separate from computer 40 for frame number identification or watermark detection of audio);

limitation of claim 24, system further including a network interface for communicating information decoded from a watermark to a remote device, which in response to the information, links the information to an action or additional information about a video object (Column 6, Lines 30-40);

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limitation of claim 25, a method for encoding substantially imperceptible auxiliary information into an audio track of a video signal including at least one video object, the method comprising: steganographically encoding object specific information about the video object into the audio track (Column 14, Lines 9-16, object specific information being the frame number of the frame being retrieved which corresponds to the video object which is the frame segment and also the encoded identification data in the audio track is imperceptible by a human according to column 8, lines 23-33); and associating the object specific information with an action, where the action is performed in response to user selection of the video object through a user interface while the video signal is playing (Column 5, Lines 40-46, where upon user selection of the video object, the action is to link the frames of information corresponding to the frame segment);

limitation of claim 26, the object specific information includes an identifier and screen location of the video object (Column 8, Lines 29-36);

limitation of claim 27, the object specific information includes information for at least two different video objects (Column 8, Lines 29-31, where plurality of identification numbers refers to frame identification number associated to a frame segment which is a video object).

6. Claims 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Broughton et al. (US 4,807,031).

Regarding claim 17, Broughton teaches, limitation of claim 17, a system for creating watermark enabled video objects comprising: an encoder for encoding a watermark in a video sequence or accompanying audio track corresponding to a video

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object or objects in the video sequence (Column 5, Lines 22-27, where binary data is the watermark encoded in a video object being item 14d in figure 1 in a video sequence by the encoder 86 of figure 5b); and a database system for associating the watermark with an action or information such that the watermark is operable to link the video object or objects to a related action or information during playback of the video sequence (Column 10, Lines 48-58, where database is inherent within the user's receiver for comparing and translating associated watermark codes for linking of video objects such as the car within display area to the car 34 in an interactive way);

limitation of claim 18, the watermark is operable to link a corresponding video object to an action or information (Column 4, Lines 63-68, where user is capable of positioning the transducer for action);

limitation of claim 19, the encoder encodes a video object with a watermark and composites the encoded video object with another video signal to create the video sequence (Column 16, Lines 29-37, where video object is the subfields of a video signal that are encoded with control data and the encoded subfields are composited with program signal for broadcasting);

limitation of claim 20, a system for processing a watermark enabled video object in a video signal comprising: a watermark decoder for decoding a watermark carrying object specific information from the video signal and linking object specific information to an action or information (Column 7, Lines 58-61, where Item 56 in figure 3 is the detector for decoding of the control or watermark data in order to link the action of the display object to the interactive toy 34); and a rendering system for rendering the action

or information (Column 7, Lines 61-67, where the detecting means is the rendering system to produce the control data of the interactive device e.g. car 34);

limitation of claim 21, system further including a user interface for enabling a user to select a watermark enabled video object during playback of the video signal (Column 4, Lines 66-68, where the transducer 16 is the user interface for selecting of a *watermark enabled subfield or video object*);

limitation of claim 22, the user interface includes the rendering system for rendering the action or information of the selected video object (Column 7, Lines 58-61, where the detecting and decoding electronics is the rendering system);

limitation of claim 23, the user interface is in a separate device from the watermark decoder (Column 5, Lines 5-9, where the user interface means is separate from watermark or control data detecting and decoding means within the unit 20);

limitation of claim 24, system further including a network interface for communicating information decoded from a watermark to a remote device, which in response to the information, links the information to an action or additional information about a video object (Column 5, Lines 19-35, where receiver/transmitter device 20 has capability of communicating with a remote device 34 which upon receiving the data from the device 20, performs a predefined action such as imitating the displayed object of the screen area 14b).

***Other prior art cited***

7. Prior art of record cited and not relied upon is considered pertinent to applicant's disclosure.

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The US Patents 4,595,950 and 4,230,990 are both applicable to claim 17 as a 102 references. The US patent 5,818,441; US Patent 5,715,403; US Patent 5,646,997; US Patent 5,640,193; US Patent 5,200,822; US Patent 5,010,405 and US patent 4,547,804 are related to applicant's invention as claimed.

**Contact information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shervin Nakhjavan whose telephone number is (703) 306-5916. The examiner can normally be reached on Monday through Friday from 8:00 am to 5:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau, can be reached at (703) 305-4706.

**Any response to this action should be mailed to:**

Assistant Commissioner for Patents  
Washington, DC 20231

**Or faxed to:**

(703) 872-9314 for **formal** communications, please mark "**EXPEDITED PROCEDURE**"

**or:**

for **informal** or **draft** communications; please label "**PROPOSED**" or "**DRAFT**".

**Hand delivered responses** should be brought to Crystal Park 2, 2121 Crystal drive, Arlington, VA, sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Tech center 2700 customer service office (703) 306-0377.

Shervin Nakhjavan *SN*  
Patent Examiner  
Group Art Unit 2621  
December 11, 2002.



**ANDREW W. JOHNS**  
**PRIMARY EXAMINER**